Detroit physicians with a "passionate commitment to serving adolescent girls." The hope of these doctors, the reporter explained, was that the spotlight during Foster's confirmation hearing would "turn from the single issue of abortion to broader awareness of adolescent health concerns" (Anstett, 1995). Her story did just that by interspersing human interest material (". . .the kind of doctor who keeps tissues for tearful patients") with a heavy dose of historical background and statistical data ("Almost 90 percent of all teen pregnancies are unintended. . . Even among adults, 60 percent of pregnancies aren't planned.")

In a detailed account of how the abortion debate developed in Fargo, ND in the 1980s, anthropologist Faye Ginsberg describes what happens when the media sacrifice socially-responsible coverage for "good TV: "By picking up violent or near-violent action as 'newsworthy,' to the neglect of the less dramatic but more representative work, most coverage of the abortion issue unwittingly colludes with the radical behavior of a vocal minority—for whom visibility is a preeminent goal—even when condemning it" (Ginsburg, 1989, p. 117).

By framing issues in particular ways, the media contribute to the creation of moral panics (Hall, Critcher, Jefferson, Clarke & Roberts, 1978) over perceived social threats (e.g., the teen pregnancy "epidemic"). As Blumer (1969) put it, a "social problem exists primarily in terms of how it is defined and conceived in society" (p. 300). By applying the "epidemic" label to teenage pregnancy, the media help to create an environment that justifies the use of stringent, authoritarian measures to fight a social disease somehow brought on by its "victims." When coupled with people's "common knowledge" about epidemics and disease, the media framing of the issue makes it relatively easy to blame teenage mothers for failing to take reasonable precautions rather than looking for ways to improve the material conditions of teenage mothers or the effectiveness of health education programs

(Neuman, Just and Crigler, 1992). Either way, the media can be and often are central to the process.

Social Learning

Few studies have directly considered the question of most fundamental concern: Does exposure to sex in the media cause those who see it to engage in sexual behavior, earlier, and in riskier ways? Two studies have found correlations between watching higher doses of "sexy" television and early initiation of sexual intercourse (Brown & Newcomer, 1991; Peterson, Moore, & Furstenberg, 1991). Although neither study was designed to sort out effectively which came first—the exposure to sexual content or the sexual behavior—both suggested that exposure to sexual content is related to early sexual intercourse among teens.

This isn't much evidence to go on, but both studies support a powerful theoretical perspective, cognitive social learning theory, that has been applied to the study of media effects for two decades. Basically, the theory predicts that people will imitate (model) behaviors of others when those models are rewarded or not punished for their behavior. Modeling will occur more readily when the model is perceived as attractive and similar and the modeled behavior is salient, simple, prevalent, has functional value and is possible (Bandura, 1994). Thus, the theory would predict that teens who spend more time watching television programming that includes graphic depictions of attractive characters who enjoy having sexual intercourse with each other and rarely suffer any negative consequences will be likely to imitate the behavior. Others have suggested that media may also provide cognitive "scripts" for sexual behavior they may not be able to see anywhere else (Gagnon & Simon, 1973). Teens may watch to fill in the gaps in their understanding about how a particular sexual scenario might work (e.g., asking a girl for a date; having sex with a new partner).

Media-violence, media-sex analog

Social learning theory has been applied most extensively to questions of how depictions of violence in the media effect aggressive behavior. Almost two decades of social scientific analysis of the role of the media in violent behavior serve as an excellent analog to the question of the media's effect on sexual behavior. More than 1,000 studies, using a variety of research techniques, including laboratory and field experiments, cross-sectional and longitudinal surveys, and meta-analyses consistently have found small positive relationships between exposure to violent content in the visual media (primarily television and movies) and subsequent aggressive and antisocial behavior (Comstock & Strasburger, 1993). Both the 1972 Surgeon General's Report and the 1982 National Institute of Mental Health Report concluded that exposure to media violence can increase aggressive behavior in young people. Meta-analyses estimate the size of the effect of media violence on aggressive and antisocial behavior as somewhere between 5 and 15% (Comstock, 1986; Comstock & Strasburger, 1990). As some theorists have pointed out, although such an effect may seem small, media are one of the many factors that contribute to human behavior that could be modified most readily (Comstock & Strasburger, 1993).

One of the most compelling of the naturalistic studies (Centerwall, 1992) found that the homicide rates in three countries (U.S., Canada, and South Africa) increased dramatically 10-15 years after the introduction of television. Although early television is not remembered as particularly violent, the earliest content analyses conducted in the mid-1960s in the United States reported the number of violent acts per hour at rates similar to current fare (remember all those cowboy shoot 'em ups?) Despite statistical controls for expected alternative explanations, Centerwall found that television remained an important predictor of the homicide rate. Centerwall estimated that exposure to television violence is a causal factor in

about half of the 21,000 homicides per year in the United States and perhaps half of all rapes and assaults.

Would analyses of the incidence of unplanned pregnancies and the introduction of TV draw similar conclusions? It is not an unreasonable expectation. Sex, like violence, is frequent and positively portrayed. Further studies of the impact of the media on sexual behavior very likely will find patterns of effects similar to those established for violent content.

Using the media

At this point it also is productive to begin thinking about the media as allies, rather than solely as culprits. Could the media be used effectively to reduce the incidence of unplanned pregnancies? The results of efforts to use the media to address a variety of other health concerns (e.g., cardiovascular disease [Flay, 1987], drunk driving [DeJong & Winsten, 1990], and HIV/AIDS [Edgar, Fitzpatrick, & Freimuth, 1992]) suggest that the answer is yes. Syndicated columnist Ellen Goodman (1995) calls for engaging the "conglomerate known as Hollywood" in "some sexual truth-in-advertising: one part passion to two parts diapers." Victor Strasburger (1995), a pediatrician and adolescent medicine specialist echoes a similar allies-not-adversaries theme in his call for more aggressive use of the media for health campaigns and prosocial purposes.

Health advocates have developed three basic strategies for using the mass media in the interest of healthy behavior: 1) public information campaigns; 2) media advocacy; and 3) entertainment-education.

Public information campaigns

Public information campaigns are the most common form of intentional use of the mass media for non-commercial purposes. Effective campaigns typically are similar to campaigns for commercial products in that they use a number of media channels and are designed to generate specific effects in a relatively large number of

people within a specified period of time (Rogers & Storey, 1987). An on-going campaign to reduce teen pregnancy in Maryland provides an excellent example.

In 1988, a media campaign aimed at 9- to 14-year-olds was launched in Maryland to promote sexual abstinence and responsibility among young people. The campaign's goal was "to keep kids from having kids." Television and radio commercials (more than $4 million in paid advertising and $3 million per year in scheduled public service advertising time and space), billboard and mass transit advertising, posters, brochures, videos, lesson plans, and special school events were used.

The attention-grabbing messages were designed by a commercial advertising firm, and included billboards that read "VIRGIN" in 10-foot-high red letters with the tag-line: "Teach your kids it's not a dirty word," as well as hard-hitting television spots. Rates of birth and abortion dropped in the first three years of the campaign. By 1991, the state was reporting a 13 percent decrease in teen pregnancies statewide and a 10 percent decrease in Baltimore City, where pregnancy rates had been among the highest in the country. Although Campaign for Our Children, the private non-profit corporation formed to spearhead the media component of the campaign, does not claim sole credit for the positive results, most observers say the campaign has made a difference. Research conducted in 1990 by the Baltimore City Health Department showed that 94 percent of students and teachers at five middle schools were aware of the program and could repeat campaign messages and slogans verbatim. Three-fourths of the young people reported that the campaign helped them talk with their parents about sex, family life, and related issues (Governor's Council on Adolescent Pregnancy, 1993).

This campaign illustrates most of the key attributes of successful media campaigns (Freimuth, 1992; Rice & Atkin, 1994): 1) Messages were targeted to and appealing for specific groups; 2) appropriate and multiple media channels were

used; 3) the campaign was sustained long enough to achieve saturation; and 4) the media messages were integrated with interpersonal communication.

Evaluations of numerous information campaigns over the past 50 years have concluded that media will be most effective at the knowledge or awareness stage of an idea. Interpersonal communication and the support of significant others in the environment (in this case, parents, schools, and probably friends) are necessary for enduring behavior change. Such reinforcement was part of the approach used in Maryland.

The Maryland campaign probably was successful also because it purchased advertising space and time despite generous donations of "free" time by the media, thus ensuring the target audience would be reached. Most campaign planners now believe that purchasing time is vital both for targeting and leveraging donated time (Donovan, Jason, Gibbs, & Kroger, 1991).

Ensuring exposure to campaign messages is especially critical when the media environment is full of competing messages. In California, the state-government supported initiative to reduce smoking has spent about $14.5 million annually on television and billboard advertising in direct competition with the cigarette industry's massive advertising campaigns. This major investment appears to be having an impact: cigarette sales and consumption have declined three times faster than elsewhere in the country (Adelson, 1994).

Reliance on public service announcements is also problematic because only non-controversial messages will be aired or printed. The CDC has had to fight to include the word "condom" in their messages about HIV prevention, and their more explicit recent campaign is getting even less exposure because media gatekeepers consider it too risque (Hall, 1994). Family planning advocates have run into similar problems even for paid advertising for contraceptive products in the past (Goldman, 1993). Despite polls showing that most American adults believe

more open discussion of sexual topics would lead to fewer teenage pregnancies, and that messages about birth control should be on television, the networks until recently have forbidden the marketing of contraceptives on television (Louis Harris and Associates, Inc., 1985; McNichol, 1994). The networks have begun to loosen up their restrictions, however, saying they will allow contraceptive advertising, ironically, as long as it is "tasteful" (Goldman, 1993).

Media advocacy

Some health activists have begun to use the media as tools for bringing health issues to the attention of the public and policy makers. Media advocacy calls for understanding how the media work and using that knowledge to get issues on the media agenda. Rather than waiting for the media to cover an issue or to run a public service announcement, health activists generate news that attracts the attention of the news media. The focus of this approach, sometimes called "media advocacy" (National Cancer Institute, 1988) is on public policies that affect health rather than on individual health behaviors (Wallack, 1990). The underlying rationale is that individuals will not be able to change unhealthy behavior unless policy supports the desired behaviors. Thus, for example, public policies that affect access to and affordability of sexuality education, contraception and abortion could be important targets of media advocacy. Policy makers also could help make research monies available for development of more effective contraceptives, and work with media to ensure more responsible information about sex and reproduction.

Entertainment - Education

One of the most promising ways of reaching the public is to incorporate socially responsible messages in popular entertainment programming, television, movies, and music. Such strategies have been effective in promoting family planning in a number of developing countries in Africa, and in other parts of the

world (Gilluly & Moore, 1986; Lettenmaier, Krenn, Morgan, Kols, & Piotrow, 1993). In India, popular soap operas have included long-running plots about family planning that have increased visits to family planning clinics and the use of contraceptives (Singhal & Rogers, 1989).

In the United States popular musicians, such as the female rap group Salt-N-Pepa, and rapper Queen Latifah independently have produced songs such as "Let's Talk About AIDS," and "Coochie Bang" (that includes the lyrics: "brothers, bang strapped, and ladies, don't let 'em in if they don't have a condom") that promote the use of condoms. Some groups, such as the Washington, D.C.-based Advocates for Youth also have worked with writers and producers as advocates for more socially responsible sexual portrayals in the media. For example, Advocates for Youth funds the Media Project in Los Angeles that has assisted writers for "Roseanne" as they developed episodes focusing on the unmarried older daughter's request for contraception. The hit show "90210," with editorial consultation from Advocates, has included a number of episodes in which the high school characters either agree to wait to have sex, or use contraceptives.

Although the impact of such messages has not been evaluated systematically in the United States, the results of similar efforts in other countries and with other topics here suggest that entertainment-education can be an effective strategy. The Harvard School of Public Health's campaign against drunk driving, which generated more than 80 television episodes that included dialogue or depiction of designated drivers, was successful in increasing awareness and use of designated drivers (DeJong & Winsten, 1990). In an experimental study of the effectiveness of embedding messages about the use of contraceptives in soap opera scripts, Walsh-Childers (1991) found that teens who watched a version in which contraception was not discussed were less likely to believe the couple used contraceptives than were

those who watched versions in which contraception was discussed either vaguely (e.g., "protection") or explicitly (e.g., "did you bring a condom?").

The insertion of socially responsible messages in entertainment media is a potentially powerful way of affecting sexual behavior because the "selling" of a particular behavior isn't as obvious as it may be in a public service advertisement, and thus, audiences may not be as likely to resist the message. "Edutainment," as it is sometimes called, also is more likely to reach and attract the attention of target audiences. The longer formats also allow more time for developing more complex messages, such as how to negotiate condom use, or how to choose an appropriate birth control method (Brown & Walsh-Childers, 1994). The primary drawback to such a strategy in the United States, however, is that the media are unlikely to include portrayals they consider potentially controversial (Wallack, 1989).

Suggestions for the future

In sum, existing research supports a qualified yes to the question: Do media affect sexual attitudes, beliefs and behaviors? At this point we know more about what kinds of media portrayals of sexuality are available than we know about how they affect their audiences. Key communication theories (cultivation, agenda setting and social learning) and years of research on other kinds of communication effects suggest, however, that the ubiquitous, consistent, and increasingly explicit depictions of frequent and consequence-free sexual behavior in all forms of mass media do affect Americans' sexual beliefs and behaviors.

Yes, we need more research that fills in some of the gaps in our understanding about how media may affect sexual behavior. Here are some conclusions to guide future investigations:

1. Television is not the only medium of concern. Most previous communication research has focused on television entertainment programming, to the relative

exclusion of other media. Although television remains the dominant medium in the United States, it is not the most important medium for some important subgroups. As we have documented here, teenagers, especially, turn to other forms of media, particularly music, movies and magazines, as they seek clues about who they want to or should be in the larger culture. Women rely heavily on women's magazines. These are important sources of sexual information that we should know more about. We also should begin looking more closely at new forms of communication, including the Internet, which some claim is becoming an important new source of sexual information.

2. There is no such thing as "the" media audience. As media grow increasingly fragmented and specialized, so do their audiences. Previous research shows that audiences often select different media diets based on ethnicity, gender, age, and class. Blacks are more likely than whites to watch television shows, listen to music, and read magazines that feature black actors, musicians and topics of interest to them. Women's magazines rarely attract male readers; and parents can barely stand the music their teens listen to. More highly educated people are more likely to pay attention to news and public affairs; people who do not work during the day watch the soaps and day-time talk shows. Future research should focus on who is watching what, and why? What aspects of media content are most relevant to the audience of concern?

3. Media effects will not be uniform across audiences. Researchers need to pay closer attention to developmental, lifestyle and cultural issues. It is reasonable to expect, for example, that more sexually active teens or teens anticipating having sex, will seek out sexual media content because it is relevant. A likely scenario is that individuals who are interested in sex will notice sexual messages in the media, may be influenced and act on them, and then may look for more of the same in the future (Brown, 1993). A series of qualitative studies lends credence to such a

hypothesis. In one study, girls who had not yet begun menstruating were much less interested in sex or sexual content in the media than girls who were more sexually mature. At the same time, girls who *were* interested in sex sought sexual content in the media and frequently surrounded themselves with images of media males they found attractive (Brown, White, & Nikopoulou, 1993).

Possible cultural differences in interpretation of sexual content were clear in a study of one of rock star Madonna's earliest controversial videos, "Papa Don't Preach" (Brown & Schulze, 1990). White college students, particularly women, thought the video was about a pregnant girl telling her father she is pregnant and wants to keep her unborn child. African American males, in contrast, frequently retold the story as a girl asking her father's permission to be with her boyfriend. For them, the "baby" in the refrain, "I'm going to keep my baby" was a boyfriend, not an infant. Learning more about differences in interpretation also will add to our understanding of media's effects on sex and sexuality.

4. Interdisciplinary research will be most valuable. Increasingly, researchers are recognizing that media effects are best understood when studied from multiple perspectives within the context of everyday life. Psychologists, developmental theorists, anthropologists, cultural studies theorists, sociologists, political scientists, health professionals and mass communication researchers have all made important contributions within their own disciplines to our understanding of how cultivation, agenda-setting and cognitive social learning occur. What new breakthroughs in theory might be forged by bringing multi-disciplinary teams together to study how the media affect our everyday lives?

5. Media producers should be held accountable. The economics of the media industry cannot be ignored. Advertisers, publishers, movie and television producers, and investors in the huge media conglomerates all have one thing in common. They do what they do to make money. As media channels expand over

the next several years, will we be looking at a proliferation of the same old sexual themes and images? Will some segments of society become information rich, while other segments become information poor? Industry officials and academicians need to be asking, much more frequently and earnestly, what can reasonably be expected of media owners and producers. What are the ethical implications of programming and business decisions? What form should social responsibility take?

We should continue to address these questions. The sexual health and happiness of future generations will be affected by whether we consider the media only a backdrop or an important piece of the cultural fabric.